ANALYTICAL SUMMARY REPORT

November 07, 2023

Tetra Tech - Denver
1560 Broadway St, Ste 1400
Denver, CO 80202-5164

Work Order: H23110201 Quote ID: H16343

Project Name: Lockwood Solvents RV

Energy Laboratories Inc Helena MT received the following 3 samples for Tetra Tech - Denver on 11/7/2023 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H23110201-001	LS-SPRG-01-G-20231106	11/06/23 12:05	11/07/23	Aqueous	8260-Volatile Organic Compounds-Short List
H23110201-002	LS-SPRG-01-G-20231106-D	11/06/23 12:06	11/07/23	Aqueous	Same As Above
H23110201-003	LS-TB-01-20231106	11/06/23 8:35	11/07/23	Trip Blank	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

Digitally signed by
Jessica C. Smith
Date: 2023.11.07 17:38:48 -07:00

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Tetra Tech - Denver
Project: Lockwood Solvents RV
Lab ID: H23110201-001
Client Sample ID: LS-SPRG-01-G-20231106

Report Date: 11/07/23
Collection Date: 11/06/23 12:05
DateReceived: 11/07/23
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 13:31 / kmh
Tetrachloroethene	ND	ug/L		1.0		SW8260B	11/07/23 13:31 / kmh
Toluene	ND	ug/L		1.0		SW8260B	11/07/23 13:31 / kmh
Trichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 13:31 / kmh
Vinyl chloride	ND	ug/L		1.0		SW8260B	11/07/23 13:31 / kmh
Surr: Dibromofluoromethane	98.0	%REC		70-125		SW8260B	11/07/23 13:31 / kmh
Surr: 1,2-Dichloroethane-d4	98.0	%REC		69-131		SW8260B	11/07/23 13:31 / kmh
Surr: Toluene-d8	109	%REC		80-119		SW8260B	11/07/23 13:31 / kmh
Surr: p-Bromofluorobenzene	119	%REC		76-123		SW8260B	11/07/23 13:31 / kmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Tetra Tech - Denver
Project: Lockwood Solvents RV
Lab ID: H23110201-002
Client Sample ID: LS-SPRG-01-G-20231106-D

Report Date: 11/07/23
Collection Date: 11/06/23 12:06
DateReceived: 11/07/23
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 15:39 / kmh
Tetrachloroethene	ND	ug/L		1.0		SW8260B	11/07/23 15:39 / kmh
Toluene	ND	ug/L		1.0		SW8260B	11/07/23 15:39 / kmh
Trichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 15:39 / kmh
Vinyl chloride	ND	ug/L		1.0		SW8260B	11/07/23 15:39 / kmh
Surr: Dibromofluoromethane	101	%REC		70-125		SW8260B	11/07/23 15:39 / kmh
Surr: 1,2-Dichloroethane-d4	100	%REC		69-131		SW8260B	11/07/23 15:39 / kmh
Surr: Toluene-d8	112	%REC		80-119		SW8260B	11/07/23 15:39 / kmh
Surr: p-Bromofluorobenzene	115	%REC		76-123		SW8260B	11/07/23 15:39 / kmh

Report Definitions:
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LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Tetra Tech - Denver
Project: Lockwood Solvents RV
Lab ID: H23110201-003
Client Sample ID: LS-TB-01-20231106

Report Date: 11/07/23
Collection Date: 11/06/23 08:35
DateReceived: 11/07/23
Matrix: Trip Blank

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 14:03 / kmh
Tetrachloroethene	ND	ug/L		1.0		SW8260B	11/07/23 14:03 / kmh
Toluene	ND	ug/L		1.0		SW8260B	11/07/23 14:03 / kmh
Trichloroethene	ND	ug/L		1.0		SW8260B	11/07/23 14:03 / kmh
Vinyl chloride	ND	ug/L		1.0		SW8260B	11/07/23 14:03 / kmh
Surr: Dibromofluoromethane	100	%REC		70-125		SW8260B	11/07/23 14:03 / kmh
Surr: 1,2-Dichloroethane-d4	99.0	%REC		69-131		SW8260B	11/07/23 14:03 / kmh
Surr: Toluene-d8	110	%REC		80-119		SW8260B	11/07/23 14:03 / kmh
Surr: p-Bromofluorobenzene	117	%REC		76-123		SW8260B	11/07/23 14:03 / kmh

Report Definitions:
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QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Tetra Tech - Denver **Work Order:** H23110201 **Report Date:** 11/07/23

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B									Analytical Run: R189812
Lab ID: 07-Nov-23_CCV_2	Continuing Calibration Verification Standard								11/07/23 10:55
cis-1,2-Dichloroethene	4.53	ug/L	0.50	91	70	130			
Tetrachloroethene	5.28	ug/L	0.50	106	70	130			
Toluene	5.11	ug/L	0.50	102	80	120			
Trichloroethene	5.12	ug/L	0.50	102	70	130			
Vinyl chloride	4.77	ug/L	0.40	95	80	120			
Surr: 1,2-Dichloroethane-d4			1.0	94	69	131			
Surr: Dibromofluoromethane			1.0	98	70	125			
Surr: p-Bromofluorobenzene			1.0	109	76	123			
Surr: Toluene-d8			1.0	114	80	119			
Method: SW8260B									Batch: R189812
Lab ID: 07-Nov-23_LCS_3	Laboratory Control Sample				Run: 5973MSD2_231107A				11/07/23 11:33
cis-1,2-Dichloroethene	4.56	ug/L	0.50	91	74	124			
Tetrachloroethene	5.43	ug/L	0.50	109	77	136			
Toluene	5.29	ug/L	0.50	106	82	125			
Trichloroethene	5.32	ug/L	0.50	106	72	132			
Vinyl chloride	4.49	ug/L	0.40	90	68	140			
Surr: 1,2-Dichloroethane-d4			1.0	98	69	131			
Surr: Dibromofluoromethane			1.0	96	70	125			
Surr: p-Bromofluorobenzene			1.0	110	76	123			
Surr: Toluene-d8			1.0	113	80	119			
Lab ID: 07-Nov-23_MBLK_4	Method Blank				Run: 5973MSD2_231107A				11/07/23 12:31
cis-1,2-Dichloroethene	ND	ug/L	0.50						
Tetrachloroethene	ND	ug/L	0.50						
Toluene	ND	ug/L	0.50						
Trichloroethene	ND	ug/L	0.50						
Vinyl chloride	ND	ug/L	0.40						
Surr: 1,2-Dichloroethane-d4			1.0	97	69	131			
Surr: Dibromofluoromethane			1.0	98	70	125			
Surr: p-Bromofluorobenzene			1.0	112	76	123			
Surr: Toluene-d8			1.0	110	80	119			
Lab ID: H23110201-001AMS	Sample Matrix Spike				Run: 5973MSD2_231107A				11/07/23 14:35
cis-1,2-Dichloroethene	4.23	ug/L	0.50	85	74	124			
Tetrachloroethene	4.96	ug/L	0.50	99	77	136			
Toluene	4.93	ug/L	0.50	99	82	125			
Trichloroethene	4.76	ug/L	0.50	95	72	132			
Vinyl chloride	4.46	ug/L	0.40	89	68	140			
Surr: 1,2-Dichloroethane-d4			1.0	98	69	131			
Surr: Dibromofluoromethane			1.0	100	70	125			
Surr: p-Bromofluorobenzene			1.0	108	76	123			
Surr: Toluene-d8			1.0	113	80	119			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Tetra Tech - Denver **Work Order:** H23110201 **Report Date:** 11/07/23

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B									Batch: R189812
Lab ID: H23110201-001AMSD	Sample Matrix Spike Duplicate				Run: 5973MSD2_231107A				11/07/23 15:07
cis-1,2-Dichloroethene	4.48	ug/L	0.50	90	74	124	5.8	20	
Tetrachloroethene	5.09	ug/L	0.50	102	77	136	2.5	20	
Toluene	5.04	ug/L	0.50	101	82	125	2.3	20	
Trichloroethene	4.86	ug/L	0.50	97	72	132	2.2	20	
Vinyl chloride	4.48	ug/L	0.40	90	68	140	0.5	20	
Surr: 1,2-Dichloroethane-d4			1.0	100	69	131			
Surr: Dibromofluoromethane			1.0	100	70	125			
Surr: p-Bromofluorobenzene			1.0	106	76	123			
Surr: Toluene-d8			1.0	113	80	119			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Tetra Tech - Denver

H23110201

Login completed by: Taylor K. Jones
Reviewed by: jcsmith
Reviewed Date: 11/7/2023

Date Received: 11/7/2023
Received by: RAT
Carrier name: NPT

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	0.5°C On Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

Samples were received by ELI-Billings on 11/6/23 by hand at 9.0°C on ice, from field.
One of the nine VOA vials for sample LS-SPRG-01-G-20231106 were received without the collection date and time.
tj 11/6/23

Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

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Account Information (Billing information)

Company/Name	Tetra Tech Region 8 START
Contact	Rindy Mortensen
Project #:	103X903523F0059231008
Mailing Address	1560 Broadway Suite 1400
City, State, Zip	Denver, CO, 80202
Email	EMI.AccountsPayable@tetratech.com
Receive Invoice	☐Hard Copy ▣Email
Receive Report	☐Hard Copy ▣Email
Purchase Order	
Quote	
Bottle Order	

Report Information (if different than Account Information)

Company/Name	Tetra Tech Region 8 START
Contact	Maura McAleese / Richard Vitamanti
Phone	(609)827-7168 / (530)798-9772
Mailing Address	1560 Broadway Suite 1400
City, State, Zip	Denver, CO, 80202
Email	firstname.lastname@tetratech.com
Receive Report	☐Hard Copy ▣Email

Special Report/Formats: ☐ LEVEL IV ☐NELAC ▣ EDD/EDT (contact laboratory) ▣ Other Level II

Comments

*Please send all deliverables to the noted contacts and R8START.LabReports@tetratechinc.onmicrosoft.com
*Please provide Region 8 START Scribe 3.3b EDD with the Level II report.
*Please contact Amanda Carlson for Region 8 START pricing.
*Please sub to Helena for 24 hour TAT.

Project Information

Project Name, PWSID, Permit, etc.	Lockwood Solvents RV
Sampler Name	John Brennan
Sampler Phone	(530)798-9772
Sample Origin State	MT
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes

A -	Air
W-	Water
S -	Soils/ Solids
V -	Vegetation
B -	Bioassay
O -	Oil
DW -	Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	8260 Short List (Target list to right)	(PCE, TCE, c1,2-DCE,	vinyl chloride, and toluene)	8260 Short List MS/MSD						See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	LS-SPRG-01-G-20231106	11/06/2023	1205	9	W	✓			✓							X	H23110201
2	LS-SPRG-01-G-20231106-D	11/06/2023	1206	3	W	✓										X	
3	LS-TB-01-20231106	11/06/2023	0835	1	W	✓										X	
4																	
5																	
6																	
7	Trip Blank lot #: 16501																
8																	
9																	

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	John Brennan	11-06-2023				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Rebecca Tucker	6 Nov 23 1346	

LABORATORY USE ONLY Rebecca Tucker 11-7-23 820

Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice	Payment Type	Amount	Receipt Number (cash/check only)
NPT	4	Y N C B	Y N	4.0 °C 0.5°	Y N	Y N	CC Cash Check	$	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

BOTTLE ORDER 179096

SHIPPED TO: **Tetra Tech - Denver**

To report an issue with this order, view Safety Data Sheets, or let us know how we are doing, scan here or go to energylab.com/contact-us

Contact: Maura McAleese

Phone: (609) 827-7168

Project: Water Analysis

Order Created by: Darcy Chirrick
Shipped From: Billings, MT
Ship Date: 11/3/2023
VIA: PickUp

Bottle Size/Type	Bottles Per Samp	Method	Tests	Critical Hold Time	Preservative	Notes	Num of Samp
(5 Sets)							
40 mL Clear Glass VOA	3	SW8260B	8260-Volatile Organic Compounds-Short List		HCL-PP	Do Not Rinse - Container is pre-preserved. Vials must be completely full with no air bubbles.	1
Trip Blank-8260 SHT							
40 mL Clear Glass VOA Trip Blank	1	SW8260B	8260-Volatile Organic Compounds-Short List		HCL	Do not open this container. Return with your samples to the lab. Do Not Rinse - Container is pre-preserved.	1
SUPPLIES							
1 Liter Amber Glass Narrow Mouth	1	FIELD	Supplies				1

Comments

HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid	NaOH - Sodium Hydroxide	**We strongly suggest that the samples are shipped the same day as they are collected.**
■ ZnAc - Zinc Acetate	■ HCl - Hydrochloric Acid	☐ H3PO4 - Phosphoric Acid	

Material Safety Data Sheets(MSDS) Available @ EnergyLab.com ->Services -> MSDS Sheets

Corrosive Chemicals: Nitric, Sulfuric, Phosphoric, Hydrochloric Acids and Sodium Hydroxide. Zinc Acetate is a skin irritant.

Subcontracting of sample analyses to an outside laboratory may be required. If so, Energy Laboratories will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.